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Maturing Born Globals in Latin America:

The Effect of Product Innovation and Access to Finance on Performance

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Abstract: Within the field of international business and entrepreneurship, the following project investigates an underexplored topic, namely the post- establishment performance of maturing Born Globals in Latin America relative to younger Born Globals. A quantitative approach is applied, where firm- level secondary data from 14 Latin American countries is analyzed using multiple regression with interaction terms. The results illustrate that maturing Born Globals tend to have lower sales growth compared to younger Born Globals, while failing to detect that product innovation affect younger and maturing Born Globals differently. Access to finance as a moderator appear to be insignificant in the full sample, while the findings in the Peruvian context illustrate that the sales growth of maturing Peruvian Born Globals is more negatively affected by difficulties in obtaining finance relative to their younger counterparts.

Keywords: Internationalization of firms, mature Born Globals, Latin America, sales growth, product innovation, access to finance

Content

1. Introduction

1.1 Problem statement

The current business environment is characterized by the internationalization of both large and smaller companies which attempt to take advantage of arising opportunities regardless of national borders (Gabrielsson, Sasi and Darling, 2004). A particular type of the latter, the so-called Born Globals are firms that internationalize within the very first years of operations and market their offering in several countries. With increased involvement from emerging and developing countries in the global economy, the phenomenon of the Born Globals is not only witnessed in developing countries but also in the Latin American region, which merits greater attention than currently receiving (Persinger, 2007; Amorós, Etchebarne and Felzensztein, 2012).

The early and rapid internationalization of these firms is indicated to affect the company as it matures, and bring along new challenges for the Born Global to overcome relative to traditionally internationalizing firms "…age at internationalization is assumed to have important implications for companies' successful expansion, survival and performance" (Zahra, 2005, p. 21). Nonetheless, little is known about the corporate growth of the Born Globals as the firm develops, and the factors that influence the continued operations of the maturing Born Global (Hagen and Zucchella, 2014; Almor, Tarba and Margalit, 2014). Concerning their performance, the few studies which exist, propose contradicting predictions; the Born Globals perform suboptimal in the second decade of operations (Almor et al., 2014) and that certain Born Globals manage to sustain high growth upon maturation (Hagen and Zucchella, 2014). In order to advance on the topic of Born Globals, research is needed to clarify how these firms behave and perform upon becoming a mature Global firm, and which factors might assist or challenge their presence.

This study contributes to the complex topic by exploring sales growth of mature Born Globals relative to younger Born Globals in Latin America, with a particular focus on two aspects that might impact the continuous success of the maturing Born Global, namely product innovation and access to finance. Born Globals are regularly considered high-growth firms which adopts a substantial level of innovativeness to succeed when expanding internationally (Cavusgil & Knight, 1997; Gabrielsson, Gabrielsson and Dimitratos, 2014). Nonetheless, innovativeness is not only hypothesized to be important in the introductory phase, but also for the maturing Born

Global. Innovative activities, for instance expanding the product line and providing a relevant product offering, could be regarded as a key factor for the Born Globals' continued operations, particularly when reaching maturity due to the commonly adopted niche-focus (Hagen and Zucchella, 2014; Almor et al., 2014).

Although the Born Globals are able to expand internationally with few tangible resources, the financial resources and capabilities of the SMEs is often mentioned as a prerequisite for continued growth and operations (Gabrielsson et al., 2004; Musso and Shiavo, 2007; Le, 2012; Ayyagari, Demirgüc-Kunt and Vojislav, 2008). In Latin America, the venture capital market, which is regarded as one of the prime sources of financing for Born Globals is still relatively underdeveloped, and thus Born Globals from this region might face increased difficulties accessing the financial capital needed for growth compared to other regions (Lerner, Leamon, Tighe and Garcia-Robles, 2014; Persinger, 2007). It is hypothesised that the younger Born Global will use networks, strategies of low capital intensity and effectuation to circumvent financial obstacles, whereas the sales growth of the maturing Born Global is more affected by greater difficulties in accessing finance due to less agility and greater formalization (Nummela, Saarenketo, Jokela and Loane, 2014; Gabrielsson and Gabrielsson, 2013).

1.2 Purpose of Study and Research Objectives

The main inquiries of this study constitute of

- *How do maturing Born Globals in Latin America perform in terms of sales growth compared to younger Born Globals?*
- *Is the effect of product innovation and access to finance on sales growth different for maturing Born Globals relative to younger Born Globals?*

To answer the research questions, the study adopts a quantitative approach, where secondary data from the World Bank Enterprise Survey, collected in 2010, is examined with the use of multiple regressions.

1.3 Delimitations

Mature Born Globals are regarded as firms that have had operations for 8 or more years, and are hence assumed to have progressed along the development phases for these particular kind of firms. The younger Born Globals constitute of firms aged 3-7 years. Thus, the study is delimited to post- establishment performance, excluding Born Globals in the very early phase of internationalization. The unit of analysis is Born Globals operating in the manufacturing

industry and the scope is limited to developing and emerging countries in Latin America. Additionally, this study is delimited to reviewing performance as measured by sales growth, due to its expected importance for continued operations for the maturing Born Global (Almor et al., 2014). Furthermore, sales growth as a firm objective, is assumed to be important as a performance indicator for the Born Global and the entrepreneur, in all phases after the introduction phase (Trudgren and Freeman, 2014; Halldin, 2012; Parker, 2009).

1.4 Relevance

The relatively newness of Born Globals as a research topic has induced a skewness towards Born Globals in the earlier stages, in disfavour of research focusing on the aging Born Global (Gabrielsson, Kirpalani, Dimitratos, Solberg and Zucchella, 2008; Almor, Tarba, and Margalit, 2014; Glaister, Liu, Sahadev and Gomes, 2014). Although, Born Globals originate from diverse locations, most studies have focused on advanced countries, prominently small and open economies (Dib, Rocha and Silva, 2010; Glaister, 2014). As studies have found discrepancies between Born Globals originating from developed and less developed countries, further research is needed to improve our understanding of Born Globals from different regions (Persinger, 2007; Cancino, 2014; Lopez, Kundu and Ciravegna, 2009; Cavusgil and Knight, 2009). Hence, this study adds value in two ways, firstly that the focus is on Born Globals in developing and emerging economies, and secondly that the study will expand knowledge regarding Born Globals that are in the later stages of their development. Moreover, this research contributes to advancement on the topic of Born Globals by providing a quantitative study in a field where research has frequently focused on exploratory case studies (Halldin, 2010).

This study is organized as follows, chapter 2 will present relevant literature on Born Globals, which constitutes the base for the hypotheses' formulation. Chapter 3 reflects upon the methodology applied, before the results are presented in chapter 4. Ultimately, the findings are discussed in light of the existing theoretical framework, before limitations and suggestions for future research are presented.

2. Literature Review and Hypothesis Development

This chapter starts out with a brief presentation of the phenomenon of the Born Globals. The developmental phases of Born Globals are thereafter introduced in order to clarify the challenges and opportunities inherent as the Born Globals mature. Subsequently, theoretical lenses on performance among Born Globals are presented, and the hypotheses are developed.

2.1 The Phenomenon of the Born Globals

The phenomenon of the Born Globals was first identified by Rennie's study of Australian manufacturing exporters in 1993, in which the Born Globals were described as "Strikingly competitive against larger established players" (1993, p.47). Accordingly, the Born Global firm is by no means a new phenomenon, even though the Born Globals have grown in importance and occurrence over the last decades (Oviatt and McDougall, 1994). The increase of Born Globals is frequently explained to derive from technological advances, increased globalization of market conditions, and easier access to capability development of both people and SMEs (Gabrielsson and Kirpalani, 2012; Rasmussen and Madsen, 2002).

A Challenge for Traditional Internationalization Theories

Companies expanding into foreign markets have been expected to follow an incremental internationalization path with a gradual increase of commitment to foreign markets after having built up a domestic base, as reflected in the Uppsala Model by Johanson and Vahlne (1990; 1977). Hence, the progress of going abroad is perceived as a process dependent on experimental knowledge and incremental steps, with the underlying assumption of that greater knowledge of foreign markets reduces the perceived risk and induces higher commitment towards internationalization efforts (Johanson and Vahlne, 1977; Frynas and Mallahi, 2011). The Born Globals on the other hand, are global from inception, and hence do not confirm to the traditional process model of internationalization (Hagen and Zucchella, 2014; Oviatt and McDougall, 1994; Halldin, 2012; Freeman, Hutchings and Chetty, 2012; Frynas and Mallahi, 2011). Even so, it has been claimed that the Born Globals do indeed follow an incremental internationalization path, but at a faster speed than the stage theory expects, where global networks and the high risk- tolerance of the entrepreneur facilitate the process of going abroad (Hashai, 2004; Frynas and Mallahi, 2011). Furthermore, the Born Globals defy the belief of that young SMEs are too restricted by resource scarcity to expand internationally, as owning a large set of resources is not observed as a prerequisite for global growth (Oviatt and McDougall, 1994; Hagen and Zucchella, 2014). In lack of resources and international

experience, Freeman, Hutchings and Chetty (2012) claim that Born Globals leverage on knowledge, networks, and a proactive behaviour in their internationalization process.

Conceptualization of the Born Global firm

Born Globals could be defined as "…business organizations that, from or near their founding, seek superior international business performance from the application of knowledge-based resources to the sale of outputs in multiple countries." (Knight and Cavusgil, 2004, p.124). The latter description reflects important characteristics of the Born Globals, namely the frequent reliance on knowledge-based resources, the prompt commitment towards global expansion, and the diversity of markets approached. Nonetheless, one of the main controversies inherent to the topic is the plentiful definitions and typologies of Born Globals, which often impedes comparisons between research conducted (Gabrielsson, et al., 2008). The main definitions include a notion of the following factors; time from firm foundation to international expansion (precocity), percentage of revenue deriving from international activities, geographic scope and the vision of the management (Gabrielsson et al., 2008). In addition, early internationalizing firms are not only referred to as Born Globals, but has also been named International New Ventures (Oviatt and McDougall, 1994) and High-technology start-ups (Jolly, Alahuhta and Jeannet, 1992). Though no consensus seemingly exists regarding a universal definition of Born Globals, the firms being referred to, have all internationalized early on. Most commonly defined as within the first three years of operations, but differing definitions of two to eight years exist (Glowik and Sadowski, 2014).

Born Globals from Emerging and Developing Markets

Though Born Globals from emerging and developing markets might have a slightly different nature and challenges to overcome than Born Globals from developed countries, it is still a novel topic with few contributions (Glaister et al., 2014; Persinger, 2007). In the context of developing markets, Persinger (2007) claims that there are several location specific- obstacles for these Born Globals, such as attaining financial capital, developing strong networks and accumulating niche- knowledge, which might impede the internationalization process. In the context of the Costa Rican Software industry, Lopez and colleagues (2009) found that the Born Globals mostly started exporting to regional markets with the same language, disregarding strategic and proximate markets such as the US. Moreover, Born Globals in developing and emerging markets might not reflect the high-tech aspect often observed in Born Globals from

developed markets. Cancino (2014)'s findings suggest that Chilean Born Globals usually operate in low- tech sectors of natural resources, which might indicate that the level of technology of the Born Globals is related to the home country's expertise in the particular field.

2.2 The Development towards Maturity among Born Globals

Even though there exist plentiful of models explaining the developmental phases of the firm (Churchill and Lewis, 1983; Scott and Bruce, 1987), these might not be applicable to Born Globals due to their early internationalization and particular liabilities when going abroad. As the Born Globals commit to international expansion at an early stage, these firms do not accumulate resources and capabilities in the domestic market before their international activities begin. Moreover, the Born Globals inherently possess several characteristics that might challenge their development, namely the liability of newness related to established firms, liability of foreignness when competing with foreign local firms, the frequently minor size of the firms, and lack of resources and capabilities (Gabrielsson and Gabrielsson, 2013; Zahra, 2005; Cavusgil, Knight, Rammal, Rose and Riesenberger, 2015).

Conceptualization of the Developmental Phases of the Born Global

Gabrielsson and colleagues (2008) whom adopt a network perspective to firm growth, suggest that Born Globals progress through the following phases; 1. 1ntroductory 2. Growth and resource accumulation, and 3. Break out where the Born Global detaches from the former network and might eventually become an MNE (Cavusgil et al., 2015). Although the mentioned model derive from research conducted on Born Globals in developed countries, the model is considered appropriate in this study due to the extensive focus on networks. As argued by Purkayastha, Manolova and Edelman (2012), in countries where the institutional framework is weak, the performance and growth of the firm is limited by institutional constraints. Thus, to circumvent the gaps in the institutional framework, a firm's development is expected to be increasingly dependent on leveraging the appropriate networks and personal relationships (Purkayastha et al., 2012).

The introductory phase of the Born Globals is characterized by a restricted resource base, where the founder and his or her knowledge might be the only resources available (Gabrielsson et al., 2008). To overcome the resource constraints, building networks and ensuring the right channel for the product become essential for rapid growth, which is needed to soften the financial lag before revenues occur (Gabrielsson et al., 2008). In the second phase, defined by growth and

resource accumulation, the networks and channels adopted are expected to assist the Born Global in accumulating knowledge and mitigating lacking resources in terms of financial capital, marketing and R&D (Gabrielsson et al., 2008). For instance, the Colombian mobile technology firm Digital Partners Group, founded in 2008, relied extensively on a collaborative global network in the technology sector and important international customers in order to expand globally (Tabares, Alvarez and Urbano, 2015). The frequently adopted niche-focus with emphasis on a few larger customers is expected to facilitate organizational learning from clients, if absorptive capabilities are present in the firm. As the Born Globals' offering is often unique in the market, competition and imitations from other companies are not expected to be a risk to the company at this stage. This allows the firm to sell the product(s) or service(s) with a high profit margin. Thus, financial resources can be accrued and the reliance on external financing, such as equity investors and banks, is expected to decrease (Gabrielsson et al., 2008).

Maturing Born Globals might reach a third phase consisting of detachment from the network or the larger global market player by applying the lessons learnt from international customers and the knowledge previously acquired through their network (Gabrielsson et al., 2008). As the Born Global matures, the dependence on external networks is assumed to restrict continued development and growth, and hence resources and competences should be developed internally to a greater degree (Glaister et al., 2014; Sepulveda and Gabrielsson, 2013).Otherwise, the Born Global is expected to become similar to traditional internationalizing SMEs, reflected in slower growth and possible financial difficulties, which induces a consolidation into a network, acquisitions by larger companies or bankruptcy (Gabrielsson et al., 2008; Gabrielsson and Gabrielsson, 2009).

For the Born Global to successfully detach from the network, additional resources and capabilities need to be assimilated (Gabrielsson et al., 2008). Besides growing the firm at a high pace through organic growth, the maturing Born Global might adopt a merger and acquisition strategy, engage in joint ventures or licencing of products (Almor et al., 2014; Gabrielsson and Gabrielsson 2013; Gabrielsson et al., 2008). Moreover, in order to reach global synergies, the Born Global must be able to align operations and marketing efforts, which often implies greater bureaucracy and formalization of the firm (Gabrielsson and Gabrielsson, 2009; Gabrielsson et al., 2014). Furthermore, it is not given that the Born Global will continue on a path with global expansions, as the mature Born Global might enter in de- internationalization and re-internationalization along its development (Hagen and Zucchella, 2014).

2.3 Theoretical Lenses on Performance among Born Globals

Although performance research in terms of the Born Globals is relatively scarce, literature has emerged along two strands, one which compares the Born Globals performance to other types of firms and another strand which focuses on capturing the factors which influence specifically the performance of the Born Globals (Shneor and Efrat, 2015). Studies comparing Born Globals to other types of firms, have often concluded that Born Globals are more likely to have superior performance (Halldin, 2012; Autio, Sapienza and Almeida, 2000; Rennie, 1993). Nonetheless, little is known about the performance of Born Globals as they become of more mature age, and how it compares to their younger counterparts.

The performance of Born Globals have frequently been analysed with emphasis on the importance of resources, knowledge and capabilities for the Born Globals' success (Knight and Cavusgil, 2005; Oviatt and McDougall, 2005; Hagen and Zucchella, 2014). From a resource based view, superior performance is assumed to derive from obtaining and leveraging the unique (and often intangible) resources of the Born Global, but neglects to include the influence of the external environment (Barney, 1991; Penrose, 1959). Moreover, revenues should derive from resources that are valuable, rare, difficult to imitate and supported by the organization, in order to contribute to a sustainable competitive advantage (Foss, 1996; Barney and Hesterley, 2006). The knowledge based view on the other side, states that fast and early internationalization is enabled by knowledge, which allows the Born Global to handle the risks related to international expansion while generating a competitive advantage (Knight and Cavusgil, 2004). The dynamic capabilities view focuses on learning from different sources, and indicates that greater performance is facilitated by the Born Global's ability to strategically adopt the accumulated capabilities, deriving from knowledge and resources, according to changes in the environment (Efrat and Shoham, 2012; Weerawerdena, Mort, Liesch and Knight, 2007). Efrat and Shoham (2012) claim that external conditions are important for strategic performance of Born Globals in the first years of life, as these will shape both challenges and opportunities. However, as Born Globals move past the initial stages, the firms' capabilities become of greater importance in terms of performance (Efrat and Shoham, 2012).

2.4 Hypotheses Development

Performance as the Born Global Matures

As the firm matures, it is predicted that it will face certain challenges, such as maintaining the flexibility and the entrepreneurial spirit in the realm of increased standardization and bureaucracy (Gabrielsson and Gabrielsson, 2009; Churchill and Lewis, 1983). Otherwise, it is

expected that the firm might enter ossification, where the absence of innovative decision-making and risk avoidance is common. Consequently, the firm might not be able to adopt its resources and capabilities in order to exploit opportunities arriving from changing market conditions, resulting in lower performance (Churchill and Lewis, 1983). Contrastingly, maturing Born Globals are also expected to have had the opportunity to assimilate valuable international resources and capabilities from networks, customers, and global market leaders, which could result in continued high performance as the Born Globals mature (Hagen and Zucchella, 2014). Moreover, the mature Born Global would have had the opportunity to build a reputation and gain legitimacy in the business environment, which could be reflected in higher sales growth (Coad, 2009).

Few empirical studies have illustrated scientific results of the performance of the Born Globals upon maturation. However, research outside the area of Born Globals suggests that firm performance is often declining as the company matures (Segarra and Turuel, 2009; Yan, 2007; Davidsson, Delmar and Wiklund, 2006, Coad and Rekha, 2008; Navaretti, Castellani and Pieri, 2014). Contrastingly, Das (1995) found a positive relationship between age and firm growth, as measured by sales, in the context of an infant industry in India. In a study of 57 maturing Israeli Born Globals, Almor and colleagues (2014) found that sales volume and stock performance decreased in their second decade of operations, leading the authors to the following "…the findings raise questions about the efficacy and business success of these companies over time, as the figures seem to suggest that most maturing, technology-based, Born-Global companies that start out as rising stars show diminishing performance in the second decade of their operation" (2014, p. 437). Shneor and Efrat (2015) on the other hand, did not find any effect of the maturity stage of the Born Global on performance, operationalized as an index of financial, strategic and self- reported measures by the top management. Nonetheless, the specific context of Israeli high-tech Born Globals in these studies, urges further research to be conducted in other sectors and parts of the world. One might hypothesize that the performance of Born Globals will tend to follow in line with research outside the area of Born Globals and hence decrease upon maturity. In addition, the assumed low survival rate as independent entities could indicate decreasing performance as the Born Global matures (Almor et al., 2014).

Hypothesis 1: *The maturing Born Global have lower performance, as measured through sales growth, relative to younger Born Globals.*

Product Innovation as a Possible Moderator

Innovativeness is prominently discussed and often advanced as one of the factors which allow the Born Global to succeed in the rapid internationalization process (Knight and Cavusgil, 2004; Zidjemans and Tanev, 2014). Moreover, innovative resources and capabilities are found to be of greater importance for the survival of Born Globals, relative to firms that follow a gradual process of internationalization (Sui and Baum, 2014). One reason for the latter might be that these companies are often characterized by a narrow product portfolio, frequently consisting of only a few innovative products due to the early and rapid internationalization (Almor et al. 2014, 2014; Cavusgil and Knight, 2009).

The commonly adopted niche-focus with emphasis on a few larger customers might facilitate initial growth and allow the Born Global to maximize learning opportunities from their customers (Gabrielsson et al., 2008). Nonetheless, the limited product offering might become an inherent challenge for the Born Global upon maturity as the firm move towards a niche limit, reflected in decreasing opportunities for business growth (Almor et al., 2014). Moreover, as Born Globals age, their products may also go through a life cycle process consisting of introduction, growth, maturity and ultimately decline, in which the products might become obsolete and replaced by superior product offerings (Klepper, 1996; McAfee, 2002). The latter is a particular challenge for Born Globals which operate in technology sectors, as technological advances lead to relatively short product life cycles (Almor et al., 2014; McAfee, 2002). Although the maturing Born Global might have products or services that continue to be difficult to imitate or substitute, and hence generate sufficient revenues on its own for continued operations, this is often not the case (Gabrielsson et al., 2008). For the maturing Born Global to remain competitive, continue growing and survive, it will be crucial that the firm invests in expanding the product line or improve existing products, and hence counterbalance the effect of a declining industry or product (Almor et al., 2014). Likewise, Hagen and Zucchella (2014) found that Born Globals which avoided a niche lock-in by supporting innovativeness across the organization, achieved continued international expansion and growth in sales upon maturity. The Brazilian Born Global Fujitec, founded in 1991, illustrates the desire for becoming less dependent on one product upon reaching maturity: “We remain focused on electronic tickets. The goal today is to develop a strategic plan to diversify a bit, try to provide

the current customers with different products…. using the platforms that we have." (Cotta de Mello, Maculan and Casotti, 2008, p.10)[1].

Empirical studies from other areas have frequently found a positive relationship between product innovations and sales growth (Bianchini, Pellegrino and Tamangni, 2016; Peters, 2008). Nonetheless, this study hypothesises that product innovation will have a greater impact on the sales growth of mature Born Globals, relative to younger ones, as it is expected that younger Born Globals have a unique product offering that remains relevant to customers, whereas the mature Born Globals must invest in product innovations to not suffer sales stagnation (Gabrielsson et al., 2008; Almor et al., 2014).

Hypothesis 2: *The level of product innovation of the Born Global positively moderates the association between younger/mature Born Globals and sales growth.*

Access to Finance as a Possible Moderator

Restricted access to finance, along with poor financial capabilities, might place severe restraints on firm performance and has been noted as one of the main threats to the Born Globals' survival (Gabrielsson and Gabrielsson, 2013; Musso and Shiavo, 2007; Le, 2012; Ayyagari, Demirgüc-Kunt and Vojislav, 2008). The commonly adopted aggressive expansion strategies of the Born Globals increases the need for financial resources and capabilities that are adapted to the international nature of the firm, relative to traditional companies (Baum, Calabrese, & Silverman, 2000; Gabrielsson et al., 2004). Seemingly, for Born Globals to achieve success along the phases, acquiring the appropriate financial resources is of great importance (Gabrielsson et al., 2004). Nonetheless, it will be argued that the sales growth of mature Born Globals is affected more severely by obstacles in accessing finance.

In the second developmental phase, it is suggested that extensive networks are used to remedy gaps in both resources and capabilities, which allow the Born Global to grow and invest in international expansion (Gabrielsson et al., 2008). Although obstacles in accessing finance is assumed to be a challenge for younger Born Globals, they frequently apply strategies that are of low financial intensity, for instance focusing on a niche market and extensive use of ICT,

[1] Author's own translation from Portuguese: "Continuamos focados na bilhetagem eletrônica. O objetivo hoje é desenvolver um planejamento estratégico para abrir um pouquinho esse leque, tentando agregar nos mesmo clientes produtos diferentes, tipo rastreamento, até o mapeamento de informações comerciais, utilizando as plataformas de que dispomos." Retrived from Cotta de Melo, Maculan and Casotti, 2008, p.10

which decrease the financial capital needed to continue growing (Almor et al., 2014). Moreover, the use of effectuation and the entrepreneurial orientation of the founder is assumed to remain strong in the phases preceding maturity, which could assist in circumventing lacking financial resources. (Nummela et al., 2014; Gabrielsson and Gabrielsson, 2013). Hence, the younger Born Global might be able to notice and exploit growth opportunities with limited financial capital, relative to mature Born Globals which might no longer possess these proactive and entrepreneurial capabilities. Particularly when detaching from the network or Global market leader in the break out phase, accessing the needed financial resources is viewed as crucial for the survival and success of the maturing Born Global (Gabrielsson et al., 2008). Moreover, it is expected that mature Born Globals will be affected to a greater degree by larger obstacles in accessing finance, as the firm will need to be able to possess sufficient resources to expand the product line and avoid a niche-lock in. It is thus hypothesised that the sales growth of mature Born Globals will be affected negatively to a greater degree by obstacles in accessing finance, relative to younger Born Globals.

Hypothesis 3: *The level of access to finance negatively moderates the relationship between younger/mature Born Global and sales growth.*

3. Research Methodology

The following chapter will present the methodological approach used for testing the previously presented hypotheses. The following components of the study will hence be reflected upon: research design, research methods, and credibility of the applied methods.

3.1 Research Design

The research approach underlying this study is to be considered as deductive, implying that a conceptual framework is established, on which hypotheses are developed and tested (Saunders, Lewis and Thornhill, 2009). The analytical strategy is characterized as explanatory, entailing that the study aims to identify causal links between previously defined variables (Saunders et al., 2009). With reference to the research questions, a quantitative research design is considered appropriate as it allows for generalization, as compared to for example a case study- approach that would have been more suitable for an exploratory study (Saunders et al., 2009). Specifically, this study can be considered to have a correlational data design, as it adopts the use of multiple regression analysis (Creswell, 2013).

3.2 Research Methods

Data use

The data employed in this study is secondary quantitative data deriving from the World Bank Enterprise Latin American Manufacturing Survey conducted in 2010[2] which represents the last available data in the region. This particular survey was chosen due to its richness in terms of available information and the quality reputation of the World Bank. Data from the Enterprise Survey has been extensively used in previous research, for example in the context of Born Globals (Glaister et al., 2014), entrepreneurial firms (Baik, Lee and Lee, 2014), and firm performance in developing countries (Dinh, Mavridis and Nguyen, 2012). The Enterprise Survey is conducted in 135 countries by personal interviews with business owners and top managers, using a representative sample of firms in the private sector (About Us: Enterprise Survey, n.a.). A stratified random sampling technique is adopted, which decreases the amount of human bias when selecting firms to be included and hence ensures a higher level of representativeness relative to other sampling methods (Saunders et al., 2009; World Bank, 2014). The Enterprise Survey includes both objective data based on firm performance, along with the firm's perception of the business environment (World Bank, 2014).

[2] The data from the Enterprise Latin American Manufacturing Survey is accessible through http://enterprisesurveys.org

Sample profile

The sample profile consist of Born Globals from the manufacturing sector which engage in international activities through export. The companies originate from large and medium sized Latin American countries which include the following; Argentina, Bolivia, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, Peru and Uruguay. Brazil is excluded from the study, as the questionnaire used in this particular country is not compatible with the other countries. Venezuela and Panama had no observations that fit the sample profile, and where hence omitted. The countries included are all characterized as emerging and developing economies according to the International Monetary Fund (2016). The particular focus on developing and emerging countries is justified by the current lack of research on Born Globals in this context. Moreover, the Latin American region represent an interesting opportunity to study a large set of Born Globals which derive from countries with the same language and Hispanic ancestry. In order to be considered harmonized, the observations should possess several characteristics in common (Frankfort-Nachmias and Nachmias, 1996). One might observe that the most distinct resemblances of the observations are their similar geographical origin, that all of the Born Globals belong to the manufacturing industry and their joint commitment towards internationalization at an early age.

Applied Definition of Born Globals

The definition of Born Globals has yet to become fully operationalized. Thus, there exists differences according to precocity, geographic scope, sector of operation, and the importance of international activities for firm revenues. Gabrielsson and colleagues (2008, p.387) state that "…for research purposes such definitions are flawed, because the ratio of exports or range of geographic international activities are influenced by the size of the BG's country of origin and economy, the country's neighbour markets and other factors such as the type of industry". Moreover, Persinger (2007) noted that having an export ratio of 25 % within three years of operations, might not be suitable for studying Born Globals in emerging markets due to their particular liabilities. Thus, this study will not include a minimum export ratio, but will adhere to the commonly adopted view of internationalization within the first 3 years of operations in order to facilitate comparisons with other studies (Knight et al., 2004). Consequently, the global vision of the founder, products with an international market potential and the sale of output in the international marketplace from inception is emphasized (Gabrielsson et al., 2008).

Initial Data Analysis Procedure

The program used for the statistical analysis is Stata 13 and 14. In order to isolate the Born Globals in the data base, the time difference between the year the firm started operations and the year that export was initiated is calculated. Subsequently, only firms which committed to international activity within the first 3 years of operations and were still involved in international activities were retained in the data set. The initial data analysis phase consisted of checking the quality and the characteristics of the data, using univariate analysis in order to prepare the data for the proceeding data analysis. Thus, this phase included dealing with missing observations, recognizing outliers and identifying non-normals. Certain observations had missing values for the chosen variables and were subsequently removed from the dataset in a list wise manner to ensure consistency in the analysis (Christophersen, 2009). Although data from the Enterprise Survey is assumed to be of high quality, human errors can occur when collecting or entering the data, and hence the data was carefully screened for incorrect observations. To evaluate the data, information regarding the precision of the sales numbers provided by the Enterprise Survey was used, where particular attention was provided to numbers which were not taken directly from official statements. Unless the outlier provided indications for representing unreliable information, the outliers where only identified but not eliminated from the data set in the preliminary analysis (Christophersen, 2013).

The resulting data set consisted of 564 observations, where respectively 475 are regarded as mature Born Globals and 89 as younger Born Globals, as table 1 on next page illustrates. The sample is unbalanced, which can be justified by that it is expected to reflect the distribution of manufacturing Born Globals in these countries[3].

The maturing Born Globals have a mean age of 19.7 years, whereas the younger Born Globals are on average 5.3 years old. The mature Born Globals are commonly greater in size as measured by full-time employment and annual sales. Moreover, the mature Born Globals derive a greater percentage of sales from international activities, respectively 53.27 % and 45.19 % for the younger Born Globals, as illustrated in table 2 (appendix).

[3] The empirical strategy is to maximize the sample size. However, we acknowledge that for some countries the sample is not representative due to few observations (less than 10). We have performed the same analyses as the ones shown in the result section, without the countries with few observations, and the results are qualitatively the same. Hence, it is not expected that the inclusion of these countries is biasing the results.

TABLE 1: SAMPLE PROFILE

Country	Total Born Globals from country	Mature Born Globals	Younger Born Globals
Argentina	72	58	14
Bolivia	7	6	1
Chile	56	52	4
Colombia	66	55	11
Costa Rica	33	25	8
Ecuador	9	9	0
El Salvador	29	25	4
Guatemala	37	35	2
Honduras	8	8	0
Mexico	79	68	11
Nicaragua	10	10	0
Paraguay	11	10	1
Peru	114	87	27
Uruguay	33	27	6
Total	**564**	**475**	**89**

Operationalization of the Variables

Dependent variable

The dependent variable constitute of performance as measured by real annualized sales growth from 2007 to 2009. Annual sales have been converted from local currencies to USD[4], and sales from 2007 have been corrected for inflation by the use of the GDP deflator[5]. The sales amounts are hence in constant 2009- US Dollars. As sales growth is measured over a period of two years, instead of just one year, short-term shocks are effectively smoothed out providing a less biased indicator of performance. The variable has been calculated as suggested in previous studies (Coad and Tamvada, 2008) by using the difference in sales from the respective years and dividing by 2.

$$\text{Real annualized sales growth} = \frac{(\ln \text{sales}_t - \ln \text{sales}_{t-2})}{2}$$

[4] Exchange rates for 31.12.2007 and 31.12.2009 was retrieved from http://www.xe.com/currencytables/?from=USD&date=2007-12-31 & http://www.xe.com/currencytables/?from=USD&date=2009-12-31

[5] GDP deflator retrieved from the World Bank (n.a.): http://databank.worldbank.org/data/reports.aspx?source=2&type=metadata&series=NY.GDP.DEFL.KD.ZG#

The use of sales growth as a measure of firm performance has been widely used in previous research (Delmar, 2003; Davidsson et al., 2006; Forsman, 2015; Coad and Tamvada, 2008). It is often recommended that several indicators for performance is included in a study. However, as mentioned by Hult and colleagues (2008, p. 1072) "unidimensional performance studies are important first steps in understanding certain performance- based relationships". Furthermore, due to the importance of sales growth for the survival of the Born Globals (Almor et al., 2014) and the scope of this study, the single indicator was considered appropriate. It is moreover expected that sales growth is prioritized as a strategic objective by both younger and mature Born Global firms (Trudgren and Freman, 2014; Halldin, 2012).

Independent variable

The independent variable used in the study is whether or not a firm is regarded as a mature Born Global, respectively coded 0 for younger Born Globals, and 1 for mature Born Globals. Mature Born Globals constitute of firms aged 8 years or more, whereas the younger Born Globals are between 3 and 7 years. Consequently, the very initial stage of introduction is excluded, as these firms are expected to have different challenges and performance goals compared to more established Born Globals (Trudgren and Freeman, 2014).

The few studies focusing on mature Born Globals, distinguish mature Born Global as those firms that have had operations for a decade or more (Glaister et al., 2014; Almor et al., 2014; Shneor and Efrat, 2015). Pellegrino and Piva (2013) adhere to a threshold of 8 years to distinguish younger and mature firms in their study of innovative firms. It is expected that the firms aged 8 years or more will have arrived at a mature stage, as the Born Global is assumed to remain in the second phase up to 5 years (Gabrielsson et al., 2008). The division is hence based on the assumption of that the Born Global's life cycle follows a staged approach. Nonetheless, it should be noted that the duration of the phases of the Born Globals might be influenced by for instance the psychic distance to initial markets and the speed of internationalization (Trudgren and Freeman, 2014).

Moderator variables

To test the moderating effect of product innovations (hypothesis 2), information regarding whether the firm introduced a new or significantly improved product to the establishment's market in the last 3 years was used. Other measures of innovation could have been adopted, such as the number of patents or R&D intensity. Nonetheless, patents do not always become

commercialized and formal R&D expenditures might be non-existing among SMEs, even though innovate activities are present (Czarnitzki, 2011; Autio et al., 2000). Moreover, the two mentioned variables are both assumed to influence performance with a delay (Coad and Rekha, 2008). The variable applied, measures actual performed innovation, which implies that the firm possessed the appropriate innovative capabilities to proceed from idea generation to the implementation of a significantly improved or new product. If the Born Global introduced a new/significantly improved product, the variable was coded 1, otherwise it was coded 0. Hypothesis 2 is tested by creating an interaction term between the Born Global variable (younger/mature) and the level of product innovation. With reference in the hypothesis prepared, the interaction term is expected to be positive.

In order to assess the moderating effect of access to finance (hypothesis 3), information regarding the top managers' perception of how challenging access to finance is for the operation of their business, was used. The quantitative scale arranged variable ranges from 0, referring to no obstacle, to 4 if accessing finance is seen as a very severe obstacle, and is treated as a continuous variable (Christophersen, 2013). According to Claessens (2006, p.210), access to finance could be defined as the "availability of a supply of reasonable quality financial services at reasonable costs". Although the chosen variable is based on the perception of top managers, Kuntchev, Ramalho, Rodriguez-Meza and Yang (2014) found, using data from the Enterprise Survey, that firms which are indeed credit constraint as measured by other variables, report greater difficulties in accessing finance. Hypothesis 3 was tested by creating an interaction term between the Born Global variable (young/mature) and the access to finance variable, which is expected to be negative.

Control variables

In order to control for the influence of factors that might confound the results, several control variables which were indicated as important by previous literature, are included. Firm size, which is operationalized by the number of permanent employees, is expected to have an effect on sales growth, although the direction of influence is ambiguous (Davidsson, et al., 2006). It could be argued that larger firms have superior performance, due to a greater base of both tangible and intangible resources which smaller firms might lack (Davidsson et al., 2006). Das (1995) on the other hand, found in the context of an infant industry in India, that the size of the firm was negatively correlated to the respective firm's sales growth.

Davidsson and colleagues (2006) argue that while the specific industry in which the firm operates is not directly related to the growth of the firm, it is expected that the dynamics of the industry will drive competition and profitability (Porter, 2008; Gabrielsson et al., 2008). In order to control for industry effects, the sector of operation are included as a dummy variables: Textiles, garments, food, plastic & rubber, fabricated metal products, non-metallic mineral products, machinery & equipment, chemicals and other manufacturing.

Hawawini, Subramanian and Verdin (2003, p.3) claim that "firms operate in a national context comprising its economic, technological, political and cultural dimensions, affecting how the firms develop their competencies". Thus, regardless of the international nature of the Born Global, the origin is expected to have an impact on sales growth through the development of competences and the respective institutional framework (Hawawini et al., 2003; Persinger, 2007). To mitigate country- level effects, the countries included are coded as dummy variables. An important assumption of including the countries (and sectors) as dummy variables, is that the variance is constant (European Social Survey Education Net, n.a.). This is an assumption that facilitates the analysis, but does not necessarily fully reflect reality.

3.3 Methodological Credibility and Critique

Credibility which is reflected in reliability, validity and generalizability, could be considered essential to every research (Saunders et al., 2009). To ensure reliability, the methodology section is attempted to be structured and transparent in order to facilitate replications (Saunders et. al, 2009; Grønmo, 2011). According to Robson (2002), reliability is frequently challenged by error and bias deriving from participants or observers. Observer error and bias might be present, as the Enterprise Survey is carried out in diverse countries by different observers, which could lead to interpretation discrepancies and differences in survey execution (Saunders et al., 2009). To mitigate the potential for observer errors, the Enterprise Survey includes a highly structured interview guide. Moreover, the variables used in this study mainly refers to objective measures, with the exception of the perception- based variable of access to finance. Nonetheless, participants might be incentivized to provide unfaithful information to hide illegal practices, such as tax evasion which could influence the reported sales numbers (Saunders et al., 2009). In order to decrease participant bias deriving from this kind of issues, the Enterprise Survey ensures full anonymity.

Internal validity concerns whether the results and the interpretation of these, reflect what they are supposed to represent (Saunders et al., 2009; Cook and Campbell, 1979). The operationalization of the hypotheses becomes of importance in this regard. For instance, the division between younger and mature Born Globals could have an impact on the result as there exists differing views regarding when a company enters a more mature phase. Generalizability refers to if the findings could be generalized to reflect the whole population and other research settings (Saunders et al., 2009). One of the main purposes of this study is to discover findings that are applicable to Born Globals in emerging and developing countries. Nonetheless, the particular focus on Latin America and the selected time period might impede generalizability. Although, the definition of Born Globals was carefully constructed in order to facilitate comparisons with other studies, the definition of Born Globals is not fully conceptualized, which might obstruct comparability to other studies.

4. Data Analysis and Results

The following section will present the estimation strategy used for the main data analysis phase, along with the results obtained, before reviewing diagnostics of the model.

4.1 Main Data Analysis Phase

In order to test the hypotheses presented, several multiple regression analyses were carried out. Initially ordinary least square regression (OLS) was used, which implies that estimates are obtained by minimizing the sum of squared residuals (Woolridge, 20013). Nonetheless, diagnostic of the data, illustrated that there exist quite a few severe outliers, which might distort the results, unless appropriate measures are taken. Thus, OLS is no longer assumed to be the best linear unbiased estimator, and more robust regression techniques should be applied (Grønmo, 2011).

The regressions were conducted using median regression, which estimates the coefficients by minimizing absolute deviations from the median (Wooldridge, 2013). The median is frequently argued to be a better estimator for firm growth which often exhibit fat tails, as the median provide a more representative picture of the central tendency in the presence of outliers (Salman and Yazdanfa, 2012; Coad and Rekha, 2008; Gel, 2010; Bottazzi, Coad, Jacoby and Secchi, 2007; Falk, 2012). This is also illustrated by reviewing the median and means of the dependent variable sales growth, where the mean is greatly biased by firms with large positive/negative sales growth. The median regression provide similar results as the robust OLS regression analysis with regards to supporting/not supporting the hypotheses, but the estimates of the coefficients diverge. Due to the greater representativeness of the median as central tendency in this case, the results of the median regression is believed to be more robust than the OLS regression, and hence prioritized when reporting the results.

$$\text{Annualized sales growth} = \alpha + \beta 1 \cdot \text{MATURE\_BG} + \beta 2 \cdot \text{SIZE} + \beta 3 \cdot \text{i.SECTOR} + \beta 4 \cdot \text{i.COUNTRY} + \beta 5 \cdot \text{PRODUCT\_INNOVATION} + \beta 6 \cdot \text{MATURE\_BG} \cdot \text{PRODUCT\_INNOVATION} + \beta 7 \cdot \text{ACCESS\_FINANCE} + \beta 8 \cdot \text{MATURE\_BG} \cdot \text{ACCESS\_FINANCE} + \varepsilon i$$

Accordingly, the first hypothesis is accepted if $\beta 1$ is negative, with the model assumption of that $\beta 5$ to $\beta 8$ are zero. Hypothesis 2 is accepted if $\beta 6$ is positive, assuming that $\beta 7$ and $\beta 8$ are zero. Hypothesis 3 is accepted if the interaction term ($\beta 8$) is negative, where it is assumed that $\beta 5$ and $\beta 6$ are zero.

TABLE 3: VARIABLE DESCRIPTION

Construct	Measurement	Definition
Annualized sales growth	Continuous	Logarithm of annualized real sales growth
Mature BG	Dummy	Mature Born Global=1, younger Born Global=0
Product Innovation	Dummy	If the Born Global introduced a new or significantly improved product to the market=1, otherwise 0
Access to Finance	Scale treated as continuous	A higher score indicates greater difficulties in accessing finance. Variable is centred to decrease multicollinearity
Firm Size	Continuous	Logarithm of permanent employees
Sector	Dummy variables	Industry sectors
Country	Dummy variables	Countries of the study

4.2 Results

Descriptive statistics of the variables

From the descriptive statistics, it possible to see that the maturing Born Globals have a lower real sales growth than the younger Born Globals, respectively 2489 USD (median) and -253 156 USD (mean) for the maturing Born Globals and 171 979 USD (median) and 760 549 USD (mean) for the younger Born Globals.

Out of the sample of 564 Born Globals, 37 % of the firms introduced a new or significantly improved product to the establishment's market in the last three years. Respectively 35% of younger Born Globals and 38% of mature Born Globals can be considered as innovative firms according to their level of product innovation. With regard to access to finance, maturing Born Globals more frequently report it to be no obstacle or a minor obstacle (45%), relative to their younger counterparts (38%). The firms which reports access to finance as a moderate obstacle contains respectively 37% of the younger Born Globals and 28% of the mature Born Globals. Concerning the Born Globals which report access to finance as a major or severe obstacle, the percentages of the two groups are similar, respectively 27% for the maturing Born Globals and the 25% for the younger Born Globals. The descriptive statistics for the variables included can be found in table 4 and 5 (appendix).

Main Findings of the Regression Analysis: Hypothesis 1

The results of the regression analysis of hypothesis 1, which is illustrated in table 6 (next page), shows that there is a strong association between the maturity stage of the Born Global and sales growth, with a p-value significant at the 1% significance level (p-value:0.001, t-value:-3.44). The coefficient of maturity stage is as expected negative, and hence provides support for hypothesis 1 of that maturing Born Globals tend to have lower sales growth than their younger counterparts. This implies that the maturing Born Globals tend to have a decrease in sales growth of -8.5 %[6] relative to its younger Born Globals, holding all the other variables constant. The pseudo r of the model is relatively low (0.0564), but can be considered acceptable as the objective of the statistical analysis is to distinguish relationships and not of predictive nature.

Among the control variables, the results show that sector affiliation have an impact on sales growth with significant p-values at the 10% level or lower for textiles and fabricated metal products, which have negative coefficients relative to the reference sector of food. With regards to the countries included, Born Globals from Bolivia, Mexico and Chile have significant lower sales growth relative to the reference sector of Peru. Honduran Born Globals have a significant higher sales growth compared to the reference country. Nonetheless due to the few observations deriving from this country, these results should not be overstated. In the case of Mexican Born Globals, the decrease in sales growth might be expected due to close ties with the U.S., which was severely hit by the financial crisis during the period studied (Leitner and Stehrer, 2013).

The remaining countries did not contribute to explaining the variance in sales growth among the Born Globals. Even though Hawawini and colleagues (2003) predict the home- country to have an effect on performance via impacting the competences of the firm, one might argue that the Born Globals are less influenced by aspects of the country of origin due to their inherent global nature, relative to companies which do not internationalize. The size of the firm is found unrelated to the real sales growth, indicating that the developmental phase of the Born Global is a greater predictor for sales growth than size. This is in line with arguments proposed by Haltiwanger, Jarmin and Miranda (2013) and Lawless (2014) which suggest that no relationship exist between size and firm growth once age is included.

[6] Coefficient from median regression: $100* (\exp(\beta_{Mature\_BG})-1) = 100*(\exp(-0.08915) -1)= -8.529164297\%$

TABLE 6: RESULTS REGRESSION ANALYSIS HYPOTHESIS 1

VARIABLES	Median Regression Real Sales Growth		OLS Real Sales Growth	
	Coefficient	Standard errors	Coefficient	Standard errors
Mature BG	-0.08915***	(0.02590)	-0.16635***	(0.03888)
Firm size	-0.00330	(0.00694)	0.00446	(0.01042)
Other manufacturing	-0.01951	(0.03186)	-0.01026	(0.04784)
Textiles	-0.10382***	(0.03679)	-0.09454*	(0.05523)
Garments	-0.05457	(0.03366)	-0.14352***	(0.05054)
Chemicals	0.00393	(0.03657)	-0.01944	(0.05491)
Plastics & rubber	0.03082	(0.03743)	0.06796	(0.05619)
Non metallic mineral products	-0.05925	(0.05803)	-0.16761*	(0.08712)
Fabricate metal products	-0.06831**	(0.03458)	-0.02943	(0.05191)
Machinery and equipment	-0.05920	(0.04179)	-0.03016	(0.06274)
Argentina	-0.02355	(0.03391)	-0.05174	(0.05090)
Bolivia	-0.16722*	(0.08615)	-0.20734	(0.12934)
Colombia	-0.02259	(0.03425)	0.03894	(0.05142)
Mexico	-0.08846***	(0.03400)	-0.07988	(0.05104)
Paraguay	0.01307	(0.06919)	0.02083	(0.10387)
Uruguay	0.04401	(0.04352)	0.12285*	(0.06533)
Chile	-0.06315*	(0.03650)	-0.09279*	(0.05479)
Ecuador	0.01389	(0.07610)	-0.05131	(0.11425)
El Salvador	-0.06367	(0.04542)	-0.05116	(0.06819)
Honduras	0.25122***	(0.08074)	0.34828***	(0.12121)
Guatemala	-0.05465	(0.04155)	-0.04066	(0.06238)
Nicaragua	0.03413	(0.07360)	0.17080	(0.11050)
Costa Rica	-0.04581	(0.04400)	-0.02491	(0.06605)
Constant	0.16473***	(0.04619)	0.21065***	(0.06934)
Observations	564		564	
Pseudo r/adjusted r^2	0.0564		0.0739	

Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1. Food and Peru are baselines

Main Findings of the Regression Analysis: Hypothesis 2 and 3

The results illustrated in table 7 (next page) do not provide support to hypothesis 2, referring to the possible interaction between stage of maturity and product innovation. The interaction term is positive but not significant (p-value of 0.478), which implies that younger and maturing Born Globals are not affected differently by introducing new products. Moreover, no evidence is found to support hypothesis 3, referring to the possible interaction between maturity stage and access to finance. The coefficient of the interaction term is negative, nonetheless the p-

value is statistically insignificant at 0.414, implying that younger and maturing Born Globals are not affected differently in terms of sales growth by obstacles in obtaining finance. In addition, both access to finance and product innovation are found insignificant in terms of the sales growth of the Born Global when they are entered as simple effects (without interaction terms).

TABLE 7: RESULTS REGRESSION ANALYSIS 2 AND 3

	Results Hypothesis 2		Results Hypothesis 3		Results Simple Effects	
	Median Regression	OLS	Median Regression	OLS	Median Regression	OLS
VARIABLES	Real Sales Growth	Real Sales Growth	Real Sales Growth	Real Sales Growth	Real Sales Growth	Real Sales Growth
Mature_BG	-0.12214***	-0.20414***	-0.10839***	-0.16527***	-0.08853***	-0.16878***
	(0.03241)	(0.04852)	(0.02551)	(0.03890)	(0.02574)	(0.03890)
Product Innovation	-0.03087	-0.03951			0.00731	0.04343
	(0.04920)	(0.07364)			(0.01917)	(0.02898)
Mature_BG#Product Innovation	0.03794	0.09803				
	(0.05339)	(0.07991)				
Access to Finance			0.01385	0.03997	-0.00139	0.00448
			(0.01833)	(0.02796)	(0.00757)	(0.01144)
Mature_BG#c.Access to Finance			-0.01623	-0.04188		
			(0.01985)	(0.03027)		
Firm size	-0.00286	0.00367	-0.00198	0.00457	-0.00229	0.00413
	(0.00696)	(0.01042)	(0.00692)	(0.01055)	(0.00699)	(0.01056)
Sector Dummies	Included	Included	Included	Included	Included	Included
Country Dummies	Included	Included	Included	Included	Included	Included
Constant	0.19465***	0.22757***	0.17921***	0.21601***	0.15752***	0.19844***
	(0.04880)	(0.07304)	(0.04571)	(0.06970)	(0.04619)	(0.06982)
Observations	564	564	564	564	564	564
Pseudo r/adj. r^2	0.0568	0.0770	0.0572	0.0741	0.0567	0.0746

Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1.

4.3 Robustness Tests

The main regression analysis provides support for hypothesis 1, while failing to detect evidence that supports hypotheses 2 and 3. These results might be related to that the moderation effects

are positive in some countries while negative in others, inducing a non-significant interaction term in the main regression analysis, as noticed by for instance Vendrell-Herrero, Gomes Mellahi and Child (2016). To test the robustness of the analysis under the acknowledgement of that the sample consist of diverse countries, it was decided to conduct separate regressions for the countries with at least 60 observations, which constitute of Argentina, Colombia, Mexico and Peru (not reported in tables but available upon request). The results are not significant with the exception of Peru, in which a negative moderation effect of the access to finance variable is found (Beta = - 0.2104927 ; p-value = 0.002). Hence, the third hypothesis is supported in the Peruvian context. This implies that for Peruvian Born Globals, difficulties in terms of accessing finance has a greater negative impact on the sales growth of maturing Born Globals relative to younger Born Globals.

4.4 Model Diagnostics

In order to assess the problem of multicollinearity, the individual and mean variance inflation factor (VIF) was examined, with satisfactory mean VIFs for all of the regressions. The largest individual VIF consist not surprisingly of the interaction term between maturity stage and innovation level, respectively 7.38, which is acceptable within the commonly adopted threshold of 10 (Williams, 2015). Hence, the results indicates that multicollinearity is not of concern in the models. The correlation between the main variables included in the models is relatively low, as illustrated by the correlation matrix in table 8 (appendix). Tests for heteroscedasticity, along with inspecting residual plots, do not indicate that unequal variance is a problem in the model.

Although the most prominent control variables from literature and reviewing previous research have been included in the model, there might exist control variables that should have been included, which could lead to a misspecification of the model due to the omitted variable bias (Studenmund, 2011; Christophersen, 2013). The relatively low explaining power of the regressions, illustrate that there could be other variables that can contribute to explaining the variance in sales growth. The latter might be expected as sales growth is inevitably influenced by factors which cannot easily be measured, such as demand for products sold. Moreover, the models could most likely have been more robust if control variables such as whether the Born Global mainly relied on organic growth or an M&A- strategy were included. Consequently, the models are limited by the availability of variables in the data set from the Enterprise Survey, along with the identified theoretical underpinnings that provided suggestions for variables to be included in the models.

5. Discussion and Conclusion

In the following section, the findings will be put in context with previous literature on the topic, along with offering suggestive explanations for the results. The results support that the maturing Latin American Born Global tend to have lower sales growth, while failing to detect that the sales growth of the younger and maturing Born Globals is affected differently by product innovations. The third hypothesis, concerning the potential moderation effect of access to finance, was rejected in the main analysis, while supported in the Peruvian context.

What happens to the Born Globals after their introduction phase is still an underexplored area. Hence, this study contributes to the academic literature on mature Born Globals in emerging and developing countries by being one of the few quantitative studies to explore the sales growth of the Born Globals upon reaching a more mature age. It has been established that the maturing Born Globals tend to have lower sales growth compared to younger Born Globals. Thus, the results corroborate research from other areas, which predicts declining performance as the company matures (Banerjee, 2014; Yan, 2007; Davidsson et al., 2006, Coad and Rekha, 2008; Navaretti, Castellani and Pieri, 2014; Fitzsimmons, Steffens and Douglas, 2005; Churchill and Lewis, 1983; Scott and Bruce, 1987). Hence, the suggestion of that the maturing Born Globals will have consistently high sales growth due to learning effects and accumulated capabilities and resources do not appear to be applicable. The findings might indicate that the mature Born Globals encounter difficulties balancing the need for formalization with maintaining the entrepreneurial capabilities, where the latter is a frequently mentioned characteristic of the Born Globals (Ribeiro, Miranda, Borini and Bernardes, 2014). While increased standardization and bureaucracy is necessary to reach and leverage global synergies, it is also expected to make employees more resistant to change, and thus impede the flexibility and agility needed to reply fast to arising opportunities (Coad, 2009; Gabrielsson and Gabrielsson, 2009). The latter is related to the concept of organizational obsolescence, which refers to that older organizations do not manage to adopt to the changing environment and customer tastes due to organizational inertia, leading to lower performance as the firm ages (Mens, Hannan and Polos, 2014).

The descriptive statistics illustrate that the typical maturing Born Global does not grow much (median of 2489 USD), compared to the younger Born Global (median of 171 979 USD). The data on sales was collected in 2007 and 2009, with the global financial crisis showing its effects on the Latin American economies in 2008 (Ocampo, 2009). Though the global financial crisis fared better with the Latin American countries than in developed economies, the impact of the

worldwide recession is assumed to have negatively affected the Born Globals since a considerable part of sales derive from international activities (Grazzi and Pietrobelli, 2016). An interesting finding thus becomes that the younger Born Globals outperformed the maturing Born Globals in such a turbulent context, where one might expect the younger Born Globals to be inherently sensitive to decreasing growth opportunities and changes in the external environment (Efrat and Shoham, 2012). Nonetheless, adaptive capabilities and greater use of effectuation might have allowed the younger Born Globals to recap on alternative growth opportunities, as illustrated by Grazzi and Pietrobelli (2016, p. 95) "…companies in the region proved resilient in the face of the contraction of foreign demand in 2008–09, experimenting with new export products and attempting to penetrate new markets". Even so, it should be acknowledged that the sample used in this study only contains Born Globals that were in such a condition to continue operations in a turbulent context, and hence is subject to the survival bias. The financial crisis might have weeded out poor-performing Born Globals, which could have skewed the distribution of the remaining younger Born Globals to the right. The lower median of the maturing Born Globals on the other hand, might reflect that the maturing Born Globals managed to remain in operations with substantial decreases in sales growth, due to for instance greater accumulation of internal financial resources.

Interestingly, even though innovation is regarded as a key factor which allow the Born Global to succeed in their rapid internationalization process (Knight and Cavusgil, 2004; Zidjemans and Tanev, 2014), product innovations are not found to contribute to sales growth, nor to be of greater importance for the maturing Born Global relative to younger Born Globals. Although several studies confirm a positive association between performance and product innovations (Bianchini et al., 2016; Peters, 2008; Trushman and Anderson, 1986; Rosli and Sidek, 2013), empirical studies have also failed to detect an impact of innovation on sales growth (Bottazzi et al., 2001; Geroski et al., 1997; Cucculelli and Ermini, 2012). Several possible explanations exist for this inconsistency.

To begin with, for the younger Born Globals, new product innovations might lead to cannibalization of existing products (Daiya, Kohei and Hiroshi, 2013; Gabrielsson et al., 2014). Assuming that the product offering of the younger Born Globals remains unique to the market (Gabrielsson et al., 2008), introducing significantly improved or new products to the market could lead to a decrease in sales of the previous product(s), and hence eliminate the effect of product innovation on sales growth. Cannibalization might also be a concern for the maturing Born Global, but more challenging is that innovations can be rapidly imitated by the increasing

number of competitors, if the product is not rare and difficult to imitate (Gabrielsson et al., 2014). Thus, the benefits from creating significant improvements or products that are new to the market is reduced, and may not be reflected in sales growth (Rosli and Sidek, 2013).

Another suggestive explanation might derive from that the Born Globals in this study origin from sectors with commonly lower added value per product, such as food, where new product innovation is of less importance and where the firms might be less prone to applying a niche-strategy. As explained by Andersson, Danilovic, and Hanjun (2015) whom compare literature on western and Chinese Born Globals, aspects related to innovation and product improvements are largely neglected in the emerging market of China. The latter is subscribed to that product innovation is less central in the internationalization process of Chinese Born Globals, as these frequently origin from traditional industries with less emphasis on a niche-strategy and with lower knowledge-intensity (Andersson, Danilovic, and Hanjun, 2015). Contrasting the perception of that Born Globals expand internationally because of insufficient demand for a niche-product in the home country, Taylor and Jack (2011) and Hahn (2015) claim that Born Globals from traditional sectors often internationalize due to threats of imitation in the domestic market. If this is the case, it could be that the impact of product innovation on sales growth is no different from younger and mature Born Globals because they both have the same needs and benefits in terms of product innovation. Rather than focusing on expanding the product offering, these Born Globals might employ a growth strategy reliant on geographic expansion, or possibly customer scope, instead (Almor, 2013).

On the other side, it could be argued that the inability of Latin American Born Globals to turn product innovations into increases in sales might reflect lacking capabilities in terms of capturing and managing the value deriving from innovative activities. Amorós, Etchebarne and Felzensztein (2012) found that early internationalizing firms in Latin America tend to be little competitive in terms of innovation related to other international companies. The latter is explained to derive from absent capabilities in terms of implementing and marketing innovative projects, a scarcity of technological competences and lacking capabilities in terms of capturing the value deriving from innovative activities (Amorós, Etchebarne and Felzensztein, 2012; Grazzi and Pietrobbeli, 2016; Coad, Cowling, Nightingale, Pellegrino, Savona and Siepel, 2014). In order to capture the value from product innovations, certain capabilities need to be in place, for instance the appropriate skills in terms of marketing, brand creation and management (Coad et al., 2014). Moreover, introducing new products is not always beneficial if it leads to neglecting to properly market and take care of the existing product offering (Gabrielsson et al.,

2014). For younger Born Globals, network and external consultants are expected to be an important source to remedy gaps in terms of possible capabilities and resources. For the maturing Born Global these capabilities are expected to become internalized to a greater degree, nonetheless obtaining the adequate labour force with the necessary capabilities and skills is often challenging in emerging and developing markets (Kim, 2014; Glaister et al., 2014). Thus, unless a strong network or the adequate work force are present to provide the necessary capabilities, the Born Global might not be able to exploit the value deriving from innovative activities.

The third inquiry of this study referred to the possibility of that obstacles in accessing finance would moderate the association between sales growth and younger/mature Born Globals, where it was hypothesised that maturing Born Globals would be more affected in terms of sales growth by difficulties in accessing finance. Interestingly, the hypothesis is supported in the analysis of the Peruvian observations, while rejected in the main analysis. One explanation for the diverging results might be that the moderation effect is positive/non-significant in the case of certain countries, while negative in others, inducing a non-significant interaction term in the main regression analysis. Furthermore, it is important to recognize that the variable applied is measured by the perception of the top manager, which might be influenced by cultural- and country- specific factors. Consequently, reporting access to finance as a great obstacle might not have the same significance across the countries, and hence lead to different results in terms of sales growth. Although, Kuntchev and colleagues (2014) found that firms which were credit constrained did indeed report greater obstacles in accessing finance, there might exist discrepancies between actual difficulties in accessing finance and the perception of top-management. On the other side, one might notice that all of the Born Globals included rely on exporting, which in itself is regarded as a cost-effective approach to internationalization, which could decrease the effect of financial constraints on sales growth (Taylor and Jack, 2011). Exporting is assumed to be more flexible in the sense that it allows for faster scaling up and down, relative to higher-commitment methods such as setting up a foreign subsidiary (Taylor and Jack, 2011). Hence, the added flexibility of the Born Global exporter might allow both mature and younger Born Globals to easily adopt their internationalization effort to limitations in terms of accessing finance, and hence decrease the effects of the latter on sales growth.

In the Peruvian context, the findings imply that difficulties in obtaining finance has a greater negative effect on the sales growth of mature Born Globals, relative to younger Born Globals. Nonetheless, the specific findings in the Peruvian subsample cannot be generalized to the

greater population. The interesting results in terms of Peru relative to other countries, might derive from that the Peruvian financial sector has developed greatly, at a rate of 30% per annum from 2003 to 2008 (Chu and Herrero, 2011). Thus, new providers of finance have emerged, alongside innovative financial products, which mostly target small and young enterprises (Chu and Herrero, 2011). Although top management of younger Born Globals might have perceived access to financial capital as difficult, actually attaining the capital needed could have been facilitated by the wide offer of financial services targeting this segment. For the maturing Peruvian Born Globals, accessing finance in the midst of the financial crisis could have been more challenging, as they might have needed a greater amount of finance, along with having fewer willing suppliers. Moreover, whereas the younger Born Global is expected to be assisted by a global market leader or the network in terms of remedying resource gaps, for instance financial capital, the mature Born Global is expected to strive for greater independence from the network (Gabrielsson et al., 2008). Thus, the mature Born Global might not have the same pool of resources to tap into if additional financial capital is needed, which might be reflected in lower sales growth. The results highlight that younger and maturing Born Globals in Peru might encounter different challenges in terms of accessing finance that induce different effects on the performance of the firm, which both managers and policy makers should be aware of.

To conclude, this study has explored the post establishment performance of Latin American Born Globals, and found that the Born Globals tend to have lower performance upon maturation, but no interaction effect was found in terms of product innovation. For managers, the lower sales growth upon maturity implies that the maturing Born Global should take measures in order to not become obsolete, bankrupt or become acquired by larger corporations (Gabrielsson et al., 2008; Gabrielsson and Gabrielsson, 2009). If the desire of the Born Global is to continue operations as an independent entity, strategies would need to be developed in order to keep sales volume growing, where Almor and colleagues (2014) propose mergers and acquisitions as a viable approach. Moreover, the findings indicate that both Born Globals' managers and policy makers, should shift the focus from producing innovations to emphasis on acquiring the capabilities needed to capture the value deriving from these. Access to finance was on the other side found to interact with the maturity stage in the context of Peruvian Born Globals, yielding an interesting starting point for further research to be conducted in order to understand the challenges related to financing for the Born Globals.

6. Limitations and Suggestions for Further Research

The study is subject to certain limitations, such as the use of secondary data. Although reducing interpretation bias, primary data could have allowed for richer interpretations into the nature of maturing Born Globals (Saunders et al., 2009). Likewise, triangulation could have been useful to corroborate the results of the study, by the use of for example selected case studies. Moreover, the results are sensitive to the chosen indicator of performance, and the time period applied, where it would have been beneficial to measure sales growth over a longer period. Although, measures have been taken to make the sales numbers comparable, differences in inflation rates and currency values might have biased the results. Additionally, the results are limited by the use of the objective measure of years to distinguish mature Born Globals, where future research could benefit from using an index of different measurements in order to separate the maturing Born Globals. It should also be noted that the countries and sectors from which the observations are drawn from are quite heterogeneous with different challenges and opportunities, which could have weakened the model. Moreover, an extended number of observations from each country could have allowed for further testing of subsamples.

Future research should attempt to address the limitations previously described, and is invited to disconfirm/confirm the results using different measures of performance and operationalization of the moderator variables. With the data set available, it was not possible to analyse if there are differences in terms of sales growth between the Born Globals that undergo organic growth relative to those which rely on mergers and acquisitions, but it could be an interesting topic for future research. Moreover, this study focused on product innovation and its importance for the performance of younger and maturing Born Globals. Nonetheless, it should be noted that Born Globals have been projected as prone to grow along three lines with focus on either customers, products or countries (Almor, 2013). Future research might yield interesting results by comparing these lines of growth for the maturing Born Global in emerging and developing markets. The main analysis and the Peruvian subsample diverge in terms of the third hypothesis. Hence, future studies should attempt to address this inconsistency by investigating the impact of access to finance on the performance of the Born Globals in extended countries, if sufficient observations are available. Ultimately, this study illustrates that further research on Born Globals is emerging and developing markets is greatly needed, with a specific focus on how these firms might deviate from Born Globals in small and open developed countries.

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8.Appendix

TABLE 2: SUMMARIZE STATISTICS FOR YOUNG AND MATURE BORN GLOBAL

	% Foreign sales	Mean age	Firm size (employees)	Sales 2009
Mature Born Global	53. 27%	19.64 years	243 employees (mean) 95 employees (median)	19 900 000 USD (mean) 4 064 754 USD (median)
Younger Born Global	45. 19%	5.31 years	114 employees (mean) 50 employees (median)	12 900 000 USD (mean) 3 598 972 USD (median)
Total	51.99%	17.38 years	223 employees (mean) 85 employees (median)	18 800 000 USD (mean) 3 890 794 USD (median)

TABLE 4: SUMMARIZE STATISTICS FOR YOUNG AND MATURE BORN GLOBAL

	Mean sales growth	Median sales growth	Introduced new/significantly improved product	Access to finance
Mature Born Global	-253 156 USD	2 489 USD	37.89%	No obstacle: 24.63% Minor obstacle: 20.21% Moderate obstacle:28.21% Major obstacle:18.74% Very severe obstacle:8.21%
Younger Born Global	760 549 USD	171 979 USD	34.83%	No obstacle: 26.97% Minor obstacle: 11.24% Moderate obstacle:37.08% Major obstacle:15.73% Very severe obstacle:8.99%
Total	-93 192 USD	17 416 USD	37.41%	No obstacle: 25% Minor obstacle: 18.79% Moderate obstacle:29.61% Major obstacle: 18.26% Very severe obstacle: 8.33%

TABLE 5: DESCRIPTIVE STATISTICS FOR MAIN VARIABLES

Variable	Observations	Mean	Std. Dev.	Min	Max
Real Sales Growth	564	.037784	.338273	-1.048832	2.070681
Mature BG	564	.8421986	.3648783	0	1
Firm size	564	4.412619	1.399492	1.098612	8.699514
Product Innovation	564	.3741135	.4843227	0	1
Access to Finance	564	0	1.26176	-1.661348	2.338652

TABLE 8: CORRELATION MATRIX FOR THE MAIN VARIABLES CONSIDERED IN THE MODEL

	Real Sales Growth	Mature BG	Firm size	Product Innovation	Access to Finance
Real Sales growth	1.0000				
Mature BG	-0.1790	1.0000			
Firm size	-0.0065	0.1251	1.0000		
Product Innovation	0.0555	0.0231	0.0444	1.0000	
Access to Finance	0.0019	-0.0083	-0.1383	0.0100	1.0000